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The monthly magazine of the

North East Victoria Amateur Radio Club

<http://nevarc.org.au/>



An Affiliated club of Wireless Institute of Australia

An Affiliated club of Radio Amateur Society of Australia Inc.



NEVARC
North East Victoria Amateur Radio Club

Volume No: 09

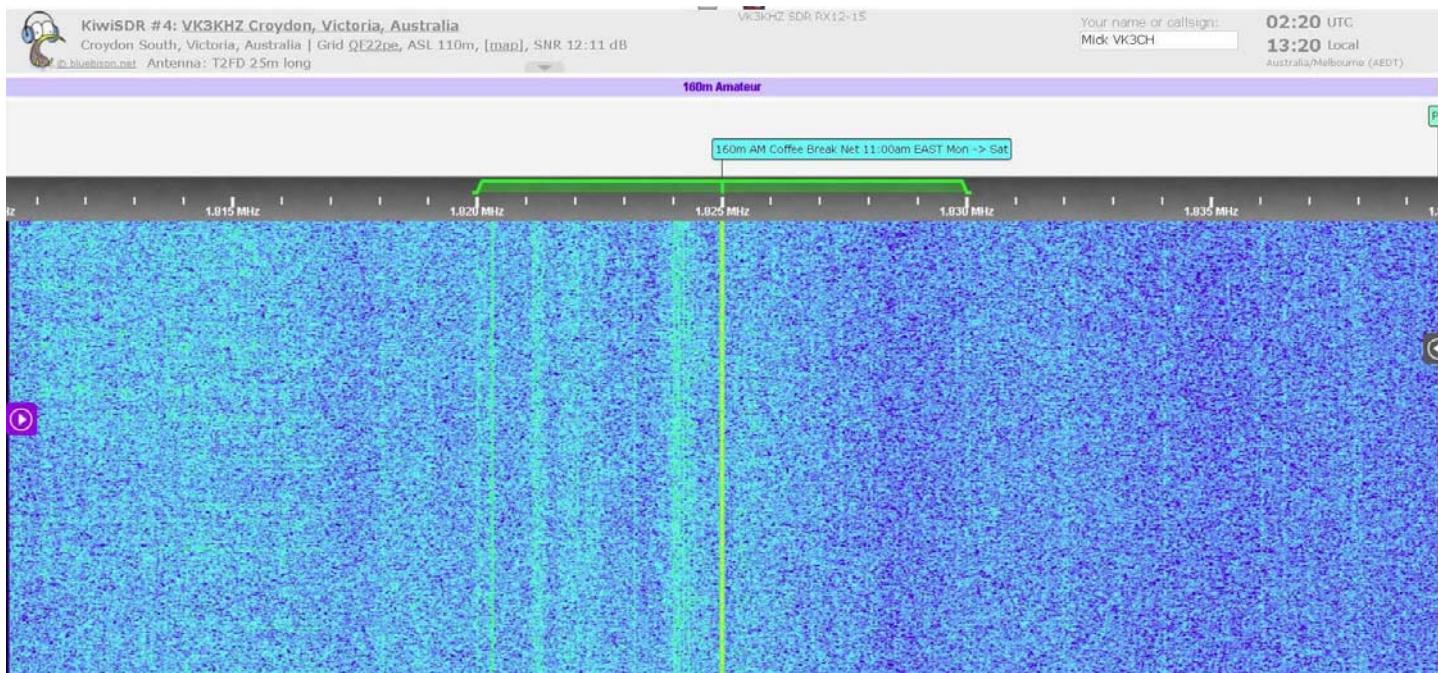
Issue 2

February

2022

Next Meeting via Zoom Sunday 13th February

With changing COVID-19 situation, meeting arrangements will be emailed to members



Screenshot of Paul's SDR located in Croydon, used by many on Melbourne 1825 kHz AM Coffee Break Net

<http://sdr-amradioantennas.com:8074/>

This is a view of Mick VK3CH, hardly getting in from home on S5, with an SDR noise floor of S5

But stations located just a few km away from the SDR site can hear VK3CH quite well

The quest was on to see if this reference signal point can be improved operating portable on 160 meters AM
Read on for the preparations involved and the outcome of the portable experiment, in Melbourne summer heat

160 Meters Portable

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160 Meters Portable

Going portable on 160 meters is fun and always an experiment with long wire antennas that requires trees handy.

Most hams will have a favourite park for portable operation. But what if you want to roam about?

I had a spot but no tall trees handy.

So I needed a long vertical antenna I can tune with radials.

I used to operate portable 160 meters from Bundoora Park years ago with a collapsible 160 meter top loaded vertical, with the passage of time it got damaged and eventually cannibalized for parts.

The new solution was now one I used years ago, a squid pole antenna with a wire preinstalled in the centre.



On top of the car are the existing mobile antenna brackets for VHF/UHF.

I needed something to hold a squid pole antenna on the car. A trip to Bunnings found items that would do the job, repurposed for a ham radio work around.

Chatting to the guys on the 1825 kHz AM Coffee Break Net, the suggestions were that I must use ground radials, which I fully intended to do anyway. Also the vertical wire needs a current in it to radiate effectively. The suggested best way to induce current was to have a side top radial to provide a capacity type hat.

I was worried that it would not take much weight on the top of the squid pole to distort it from vertical.

A single wire will bend the squid pole so I thought three wires would keep it straight like guy wires.

The only concern was finding the top end of the inner wire so an electrical contact can be made to the top wires.

Testing with an ohm meter proved the top internal wire was in fact soldered to the top metal pin.

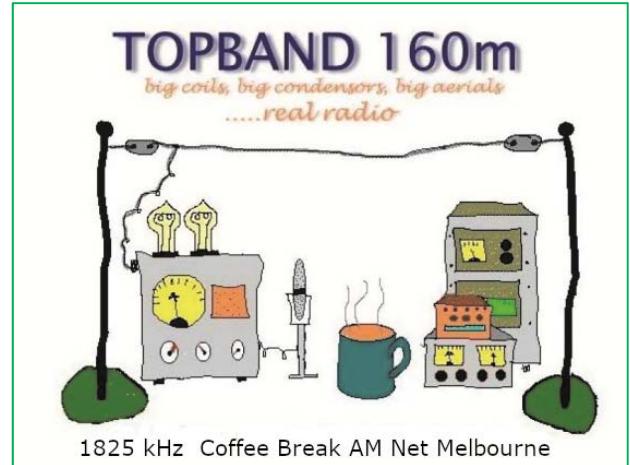
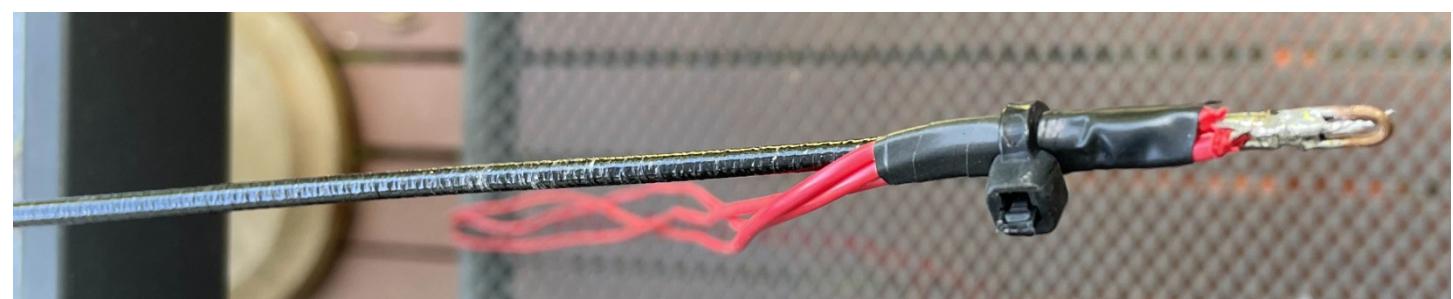
I decided on installing a three wire capacity hat on top of the nine meter squid pole.

This way I don't need any trees or a building to tie off a length of inverted "L" wire.

I cut three thin wires to a three meter length and soldered them together on the top squid pole metal pin.

I thought about having a screw terminal to attach them only when needed but decided a soldered connection would be more reliable, as once up in the air you won't see any loose connections.

Some electrical tape and one cable tie were used to keep the sag weight stress off the soldered connection.



To keep any weight stress off the squid pole I elected to use very fine builders twine.
I have used this previously on my HF portable dipoles, very lightweight but strong enough to keep the dipole in the air. I also tie bright coloured bits of tape to stop the public walking into the wire, must always think of legal issues setting anything up in a public place.
I could not find my reel of fine builders twine since moving house, so another trip to Bunning's for more.



Three lengths of 40 meter ground counterpoise radials to lie on the ground, all wound on a roll for quick deployment, just run them out in turn and wind back up joining each one in turn, to pack up afterwards



Well I thought it was three lengths, when it was unwound I found I had cut it into sixteen shorter radial lengths
I don't know what possessed me to do that, time to rejoin them.
Plus they were only a total of 20 meters length each, not the desired three runs of 40 meters length

The end of the “Electric Bug” squid pole with nine meters of wire at the end before being extended



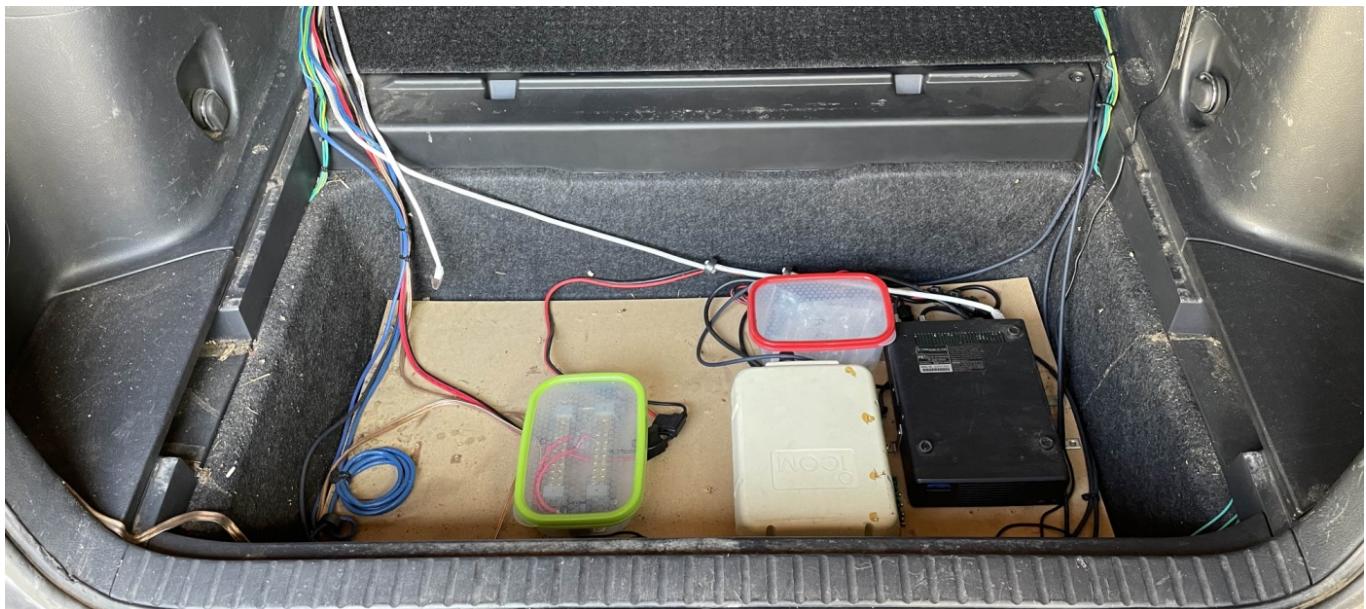
The IC-7100 radio head in the car, connected via extension cable, which is just CAT5 Ethernet cable



Rear of the car... what radios?

Oh... there they are, an ICOM IC-7100 with an AH-4 HF Auto Tuner

Two 10 meter counterpoise radials travel the length around the car for 40 meters, I gain two extra "S" points
The fuses and DC power bus distribution are inside the green lunchbox, so nothing can fall onto it and create a short circuit and maybe a fire, always keep electrical safety in all your designs



In its heyday the rear of the car had 5 radios installed, HF, VHF/UHF, 6 meters, 23cm and a UHF CB.
Hence the care with the DC power bus distribution.

Now only the IC-7100 is left, but as that covers MF-HF-VHF-UHF, the one radio suffices.

Also less clutter inside the car, now that Police are more enforcing driver safety, or is that revenue collection?
With a nine meter squid pole on the top of the car we certainly won't be mobile during portable operation.

To enable a fair comparison I operated portable 1.3km north of my QTH.

This way signal strength reports can be compared to what I normally hear, or be heard from home.

But a look on Google Earth prior found that my proposed 40 meter runs of counterpoise wires were not going to fit, well not in a straight line anyway. I decided to settle for 20 meter runs instead, not ideal, but you have to adapt to the land area you have. I looked at other parks in the area but too many risks of car traffic and the general public. At least I am the only person on the land area I have chosen on a public holiday.

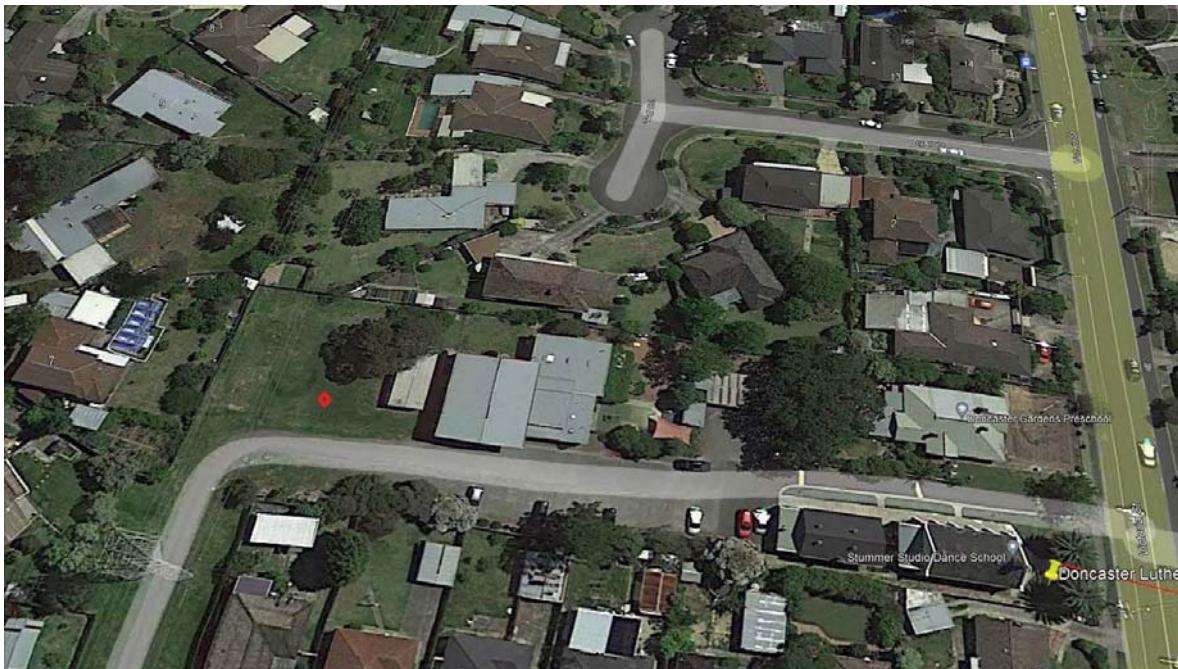
FIRST TEST TO SEE RESULTS OF THE PORTABLE LOCATION

The idea was to operate the 11am Melbourne Coffee Break 160 meters AM Net as portable on Australia Day. But a test a week prior looked like a good idea, to fix any as yet any unknown problems, before Australia Day. Arriving early morning, with less than a 1.5 km drive, I enjoyed setting everything thing up at a lazy pace. We are not as young as we used to be, lifting things and the weather tires me out a lot more than years ago.

The radio used is installed in the rear of the car with the radio head installed on the dash in a safe location so I can drive safely. The IC-7100 has 30 watts quoted output on AM, which is similar to my IC-9100 at home that has 25 watts of Digital Low power modulation AM. So power of transmitted AM at either location is similar. At home recently the background noise on 1825 kHz has been S4 ~ S5.

Months ago the noise was far worse.

Melbourne Coffee Break 160 meters AM Net stations are heard quite well when at home, with just a few down in the noise, however these are located further away from me, but I can understand all that is said.



The portable location with the car parked at the site of the red marker
This gave enough run for 20 meters of counterpoise radials from the car

A COMEDY OF ERRORS

On the day of the test I arrived at 9.30am, but I had to squeeze through the driveway as police were booking someone and they just park as they please, across the driveway.
I should have seen this as an omen of what was to come.

Running out the capacity hat radials was first, the idea of joining the string via paperclips was a good choice. But I had dramas trying to lift the extended squid pole into the top round PVC tube. With the weight of the squid pole being extended with the extra weight of the capacity hat wires and thin string line, it really amplifies even the slightest weight. It was calm with no wind, so I cringe to think what would happen on a windy day.

Anyway after a few attempts all I succeeded in doing was tangling all the capacity hat and string wires. My idea of mounting on top of the car was a bad idea as I don't have strength in my arms anymore; none of this can be done on my own.
I packed the tangled mess up in disgust and returned home.



The top mounting cup before the 50mm PVC tube inserted



With the 50mm PVC tube inserted

This ended up being too high to practically insert the squid pole and wire down inside at the same time



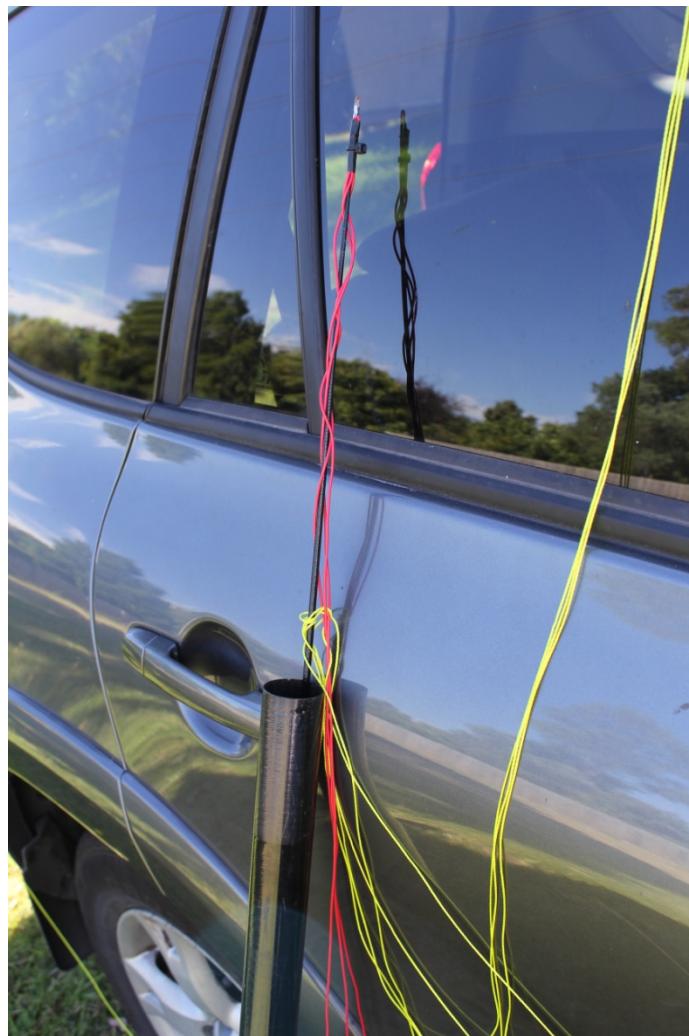
A paperclip to join the counterpoise to the string, my only successful part of the experiment



The squid pole extended a bit so the counterpoise radials can have the string lengths attached



The squid pole with the capacity hat wires, before they tangled
Erecting the squid pole requires locking each section with a slight turn
All these turns add up and eventually twist the top wires and attached string lines



The mess after trying to slot the squid pole into the PVC tube, not to mention trying to get the inner wire into the PVC tube to the bottom while trying to insert the squid pole, it just can't be done



The mess after it was packed away, I drove home very depressed



Two hours later the XYL had untangled it all and the three thin twine sections were back on the reel
How many ham radio wives do you know that would do this for their OM?

IT HELPS TO BE ON FREQUENCY

The Melbourne Coffee Break 160 meters AM Net used to be on 1843 kHz, but moved to 1825 kHz. But when I first came across the moved frequency I got the best reception on 1824 kHz so I thought that was the frequency and never thought to ask if it was correct, but I know now that is actually 1825 kHz.

They moved from 1843 kHz as many modems in people's homes caused interference on that frequency. Years ago however the Melbourne Coffee Break 160 meters AM Net used to be 1825 kHz so they have gone back to the original frequency.

AUSTRALIA DAY CONTEST 2022 – A NEW CONTEST ~ RULES FROM W.I.A.

The Australia Day Contest took place on Wednesday 26th of January 2022.
The rules are generally derived from the RD.

This was a trial contest so the contest committee are keen to hear from the contest community for suggestions on how to improve it for 2023.

The Contest ran from midnight 25th January on the east coast and extended until midnight on the west coast.
(Daylight Saving) a 27 hour Contest.

This also gives all VK call areas a full 12 hours of AX prefix use at the same time.

VK operators can substitute their VK call for the AX call across Australia Day.

Full details and rules are available on the WIA web site.

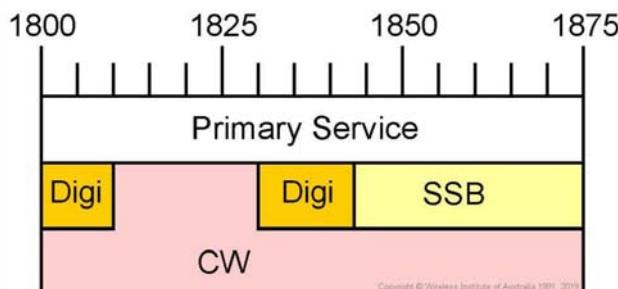
<https://www.wia.org.au/members/contests/australiaday/>

On 160 meters HF SSB Voice transmissions should be within 1843-1875 kHz.

But the Coffee Break 160 meters AM Net is now on 1825 kHz, so this is outside of the range to score points.

Maybe they will change that next year.

160 metre band – Advanced licensees only



1800 - 1875	CW	
1800 - 1810	Digital data modes - Region II DX window	(Note 1)
1830 - 1843	Digital data modes - Region III and international FT8	(Note 1)
1838 - 1843	Digital data modes - Region I DX window	(Note 1)
1839 - 1843	Digital data modes - Region II DX window	(Note 1)
1843 - 1875	SSB / AM	(Note 2)

Note the different digital segments used in the three IARU regions. It is recommended that digital operation should be within the Region III segment whenever possible, except at times when it is necessary to operate elsewhere.

Operation may vary from the band plan during times when all stations within working range are in full daylight.

SECOND ATTEMPT AT SETTING UP PORTABLE 160 METERS

It was time to rethink the whole idea of operating 160 meters portable.

I used to have the antenna mounted on the grass years ago and that was far easier to work with.

Time to hunt for all the stuff, just a matter of finding it, unless I have flogged it at a Hamfest, thinking
"I'll never ever use that again..."

The more stuff found is less cash required to be spent, which makes the XYL happy.

I found one of my old surveyor's tripods which would be perfect for supporting the squid pole.

Just open the outer stands fully and the squid pole won't tip over and once the top counterpoise wires are tied off, they will act as a set of guys.



The surveyor's tripod with some 50mm PVC installed from a right angle bracket

The inner squid pole wire just protrudes 10cm from the end of the bottom of the PVC pipe

An SO-239 socket will be installed on the bracket, the end clip of the wire will attach to the SO-239 centre pin
The tripod base legs can extend further out making the stand very stable, but tent pegs can be added, if need be

The U bracket bolts squeeze the PVC pipe slightly so the squid pole stops just short of falling through the PVC pipe, with enough wire handy to reach an SO-239 socket. A screw for the three counterpoise radials will be added to the metal plate. A run of thin coaxial cable back to the radio in the car will complete the installation. A long run of coax, if I can find any, means the antenna can be placed away from the car, so it will be possible to place the antenna on a sports oval and park the car on the boundary fence.

CONSTRUCTION BEGINS

Firstly it was taking off the now defunct holder I had placed to top of the car roof rack. Everything else remains, no changes to the radio setup, it is the same as I used portable at Bundoora Park. Last time I operated 160 meters portable was in February 2012, ten years ago.



Portable on 160 meter Net at Bundoora Park in February 2012, with a top loaded vertical

Most of the work involved drilling the bracket to accommodate the SO-239 socket and counterpoise radials. I still don't own a vice, so I just stand my weight on the metal bracket and drill the required holes on top of a block of wood. Fortunately only five holes were required.



The SO-239 socket mounted on the plate, with a screw to terminate the three ground radials



The other side of the mounting plate, the squid pole wire gets pushed onto the centre pin of the S0-239 socket
The plate already had the hole where the S0-239 socket passes through, so one less large hole to drill

Last job was to solder PL-259 plugs to some thin 50Ω coax for connection from the car to the base of the mounting plate. The PVC was cut back a little to give more room to run the inner wire to the S0-239 socket. All the sockets and coax were checked with a test meter on the very high ohms range to ensure no shorts. Always need to ensure no drill leftover fine metal dust has found its way into anything vital to cause problems. Everything was found in the junk box, not a single dollar spent on anything for the revised ground level option.

The spare length of coax I found was LL195, Velocity: 66%, Attenuation: 7.21dB per 100m (30 MHz) I had 12 meters length, so losses at 30MHz are 0.86dB, for a 12 meter length of LL195. At 1.8MHz losses are going to be negligible.

One good thing about 160 meters, cable and connector losses are not really a concern, compared to VHF/UHF.



To get a reliable connection I replaced the squid pole wire pin with a soldered banana plug



The added banana plug socket with short run to the SO-239 socket



The reverse side with lots of fingernail polish to keep the locking screw tight

While I was at it, I retested the circuit from the tips of the capacity hat wires to the new soldered banana plug on the squid pole internal wire, perfect continuity and wriggling everything had no affect, low ohms all the time. I have become famous over time for crappy connections when portable, so more vigilance from now on. Every single screw was retightened and checked.

Soldering the coax connectors was straight forward, but I realised I had not done this for a few years. But all the inner coax measurements come back to you, can tell the distances to prepare just by sight. The test meter confirmed all was good.

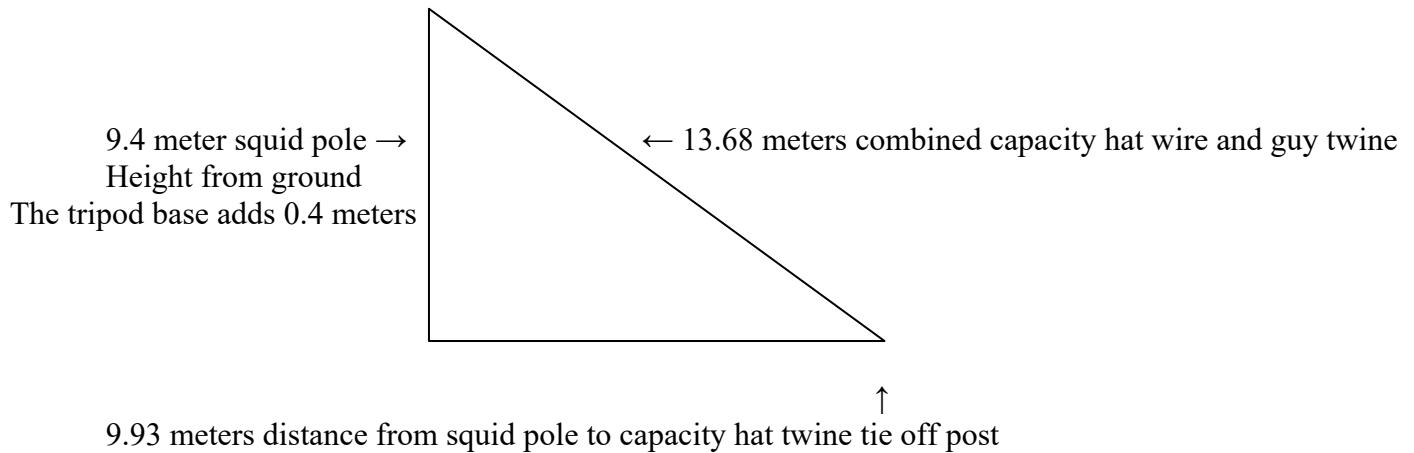


TRIANGLE THEORY CLASS – AUTOMATIC GUY WIRE PREPARATION

With some triangle theory the length from the squid pole where the capacity hat wire twine gets attached to the ground stakes can be marked with the counterpoise wires with some yellow heat shrink and the twine can be attached before the squid pole is erected.

Then as the squid pole reaches maximum length, the capacity hat guying is automatically set correct and the squid pole won't take off in any strong wind.

Hopefully the threat of tangled guy wires is prevented with this method. Also when lowering the squid pole the guy wires will fall to the ground but remain attached to the stakes ready to be wound back on to the reel.



I did not want the capacity hat twine tight, so I marked the radial wires at 9.7 meters, the yellow heat shrink are 0.4 meters long, so placement of the tie off stake post can be remembered along what length of the yellow heat shrink on the radial wire works best for correct tension. The yellow heat shrink ends will mark a distance of 9.5 meters one end and 9.9 meters the other end.

FIXING UP THE COUNTERPOISE RADIALS

As mentioned, I discovered the reel of what I thought were full length counterpoise ground radials has been cut by me when doing some 160 meter experiments.

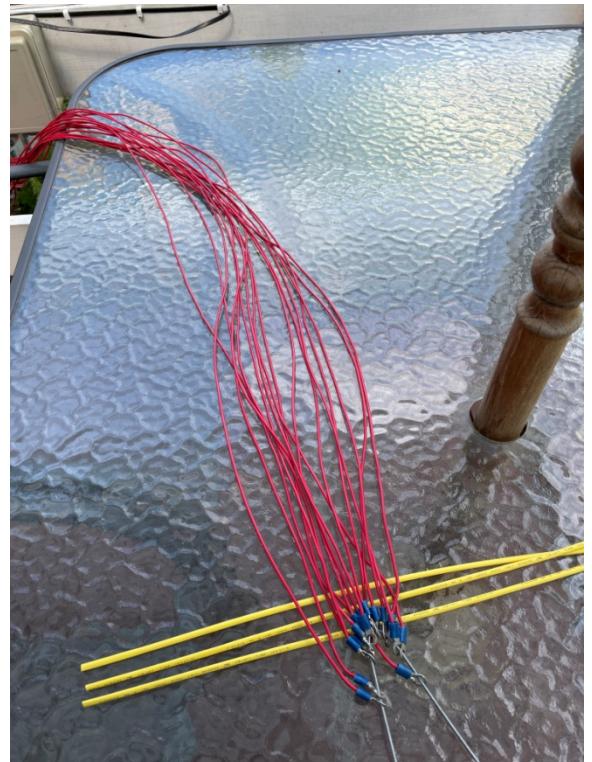
I don't remember why I did that.

So after measuring and counting them, the wires were resoldered to 20 meter lengths with the yellow heat shrink markers.

I wanted 40 meter lengths as recommended, but that's all the wire I had and Australia Day was fast approaching.

I only found out about the shorter lengths when I was attempting my second test, which ended up aborted once I discovered no ground radials were ready that time.

5 lengths of wire were joined up, making three lots of 22 meters each, with a heat shrink marker →



SECOND, ATTEMPTED, TEST TO SEE RESULTS OF THE PORTABLE LOCATION



The abandoned test, after discovering the short lengths of ground radials would not do for a proper ground. I only found this out when I rolled out the first short wire from the reel, pays to check prior before going out into the field – yes?

The high tension cables seen have been out of commission for many years, but the towers still remain. While the squid pole looks close to the high tension aerial cables in the photos it is no where near the height.

A SEARCH FOR MORE COUNTERPOISE WIRE

Before the portable operation I asked the guys on the Melbourne Coffee Break 160 meters AM Net if 20 meter ground radials were going to adversely disadvantage me instead of the desired quarter wavelength of 40 meters. The opinion was the difference in lengths from 20 meters or 40 meters would be negligible.

I found a quarter wavelength calculator online and for 1.825 MHz with a cable velocity of 095, the maths is Radials ($\lambda \times 0.28$) * vf = 43.73 meters radial length, being for a wavelength of 164.4 meters.

I also asked about the radiated direction from ground counterpoise radials, does it favour towards them or reflect away from them. No one could say either way but the internet says the direction of RF will favour to the side of the most ground counterpoise radials. In other words if you had lots more radials on the east side of your antenna, then your signals will favour the east.

If anyone has technical proof of otherwise I am keen to get the details from you.

Either way I intend to have radials as equally placed as possible when portable, it depends on the chosen site.



The home radio, IC-9100 on the Coffee Break 160 meters AM Net

While the IC-9100 has an internal ATU, I find the separate HC-200 AT does a better job with 160 meters

FREE WIRE

Someone must want me to be portable on 160 meters, I found not one but two reels of 100 meter twin wire rolls at the property selected as portable. This meant that two lots of 40 meter runs can be cut and then the twin pulled apart over the 40 meter length and have lugs soldered on the ends. This has just saved me about \$100. The timing of this find could have not been better, happening on Monday morning just before Australia Day.

So the original three lots of 20 meter counterpoise wires will be retained and the additional three lengths of 40 meter counterpoise wires will be added as well, so six radials 60 degrees apart will be deployed.

The 40 meters lengths will not fit on the property on a straight line, so they will be run to the fence and then along the property perimeter as straight as can be done.

Drew VK3XU said that an unterminated end of counterpoise ground radial 40 meter wire length will give low impedance at the antenna end, which is what you want, to generate maximum current into the antenna element and hence maximum radiation.

The job of carefully pulling a 40 meter length of the twin apart to separate them without any tangles was done at the portable site, as it is much less cluttered than the home backyard. But all my preparations have been done in near 30 degree heat; ham radio is hard work at times. The fast approaching deadline of Australia Day is a motivator to keep on going to get things completed in time.

At least next time I ever go 160 meters portable all the equipment will be tested and ready for use.

AUSTRALIA DAY 2022 - AX3CH ~ PORTABLE - DONCASTER

While I could have done a test beforehand, the weather was too bloody hot to play radio outside, the few days just before Australia Day, so I took the risk of “it will be right on the night”.

Hopefully all my hassles have been discovered and dealt with, famous last words.



I had the idea of recording video of it all, to put on YouTube, but being on your own its too much extra work on top of setting up in unknown possible changing unkind weather, so I did not bother, the photos will have to tell the story. Part of the exercise was to determine if all this can be done on my own, in my unhealthy old age.

Of course being Australia Day it's a prefect excuse for beer and a BBQ, but with all the COVID-19 dramas, I decided not to bother with any food since I was on my own, how times have changed for the worse, so much for enjoying old age and the hobby with your mates these days, thanks to this stupid Omicron COVID-19 virus. Australia Day weather was for hot conditions but no rain or storms until later in the afternoon so it was on.



Reel of three thick 40 meter length ground counterpoise radials made up only on the day before Australia Day
With all 120 meters of wire rolled up it is quite heavy to carry

Arriving at 8.20am I set it all up at a leisurely pace as it was already hot.

By 8.50am it was all ready. I tried to tune it with the AH-4 ATU but it went clunking through all its combinations but refused to match the vertical. I tried other bands of 40, 20, 15, 10, and 6 meters, none would tune. As the radio did not find a match its power was restricted automatically for safety.

I tried taking off the short counterpoise radials, but no luck, so swapped to just the long counterpoise radials, but no luck and even no counterpoise radials, but no luck, it refused to tune it up.

So I went home and got a new thicker run of coax, with the new coax in line, still all the swaps with the counterpoise radials still had the AH-4 ATU unable to get a match on any band.

So I think the fault is in the back of the car setup, but I was not going to investigate it in the heat and flies.

AUSTRALIA HAM RADIO 40 METER NET ON 7.100 MHz ~ Hosted by Ron VK3AHR

Ron's 40 Meter Net starts at 10.00am, so for a test I took a listen, prior to the AM Net that starts at 11.00am. My only concern was not making the car battery flat with two hours of portable operation.

The battery won't be 13.8 volts without the alternator running so the RF power may not be the full output. But a battery charger was kept on site so I could grab that if necessary, but I did not need it.

On Ron's 10.00am Net I could hear everyone very well with a noise floor of S4.

On the 11.00am AM Net I could also hear everyone very well with a noise floor of S2.

I could not get in at all as the radio was auto limiting the transmitter due very high VSWR.

Except for one brief moment when it did tune up, but did not stay tunned up for long, so it does work.

THE RESULTS – AUSTRALIA DAY 2022 – AX3CH ~ PORTABLE DONCASTER ~ QF22nf

As the radio power was auto limited no one heard me on the 160 meter Net.

Half an hour later it was all packed up.



Radio in the car, all on the 160 meter AM Net heard quite well, except Dallas VK3EB who was portable



The setup portable



View to one of the capacity hat wire stakes

WHAT'S NEXT

To say I'm disappointed after all the effort is an understatement.

Next job is to investigate the car tuning setup for faults; maybe the 160 meter squid pole setup is not at fault. One way to test it would be to set it up at home near my 160 meter top loaded vertical and try it out with another ATU in the shack. If that works then the fault is in the car setup, but it has worked fine up until now.

Next portable excuse is ANZAC Day.

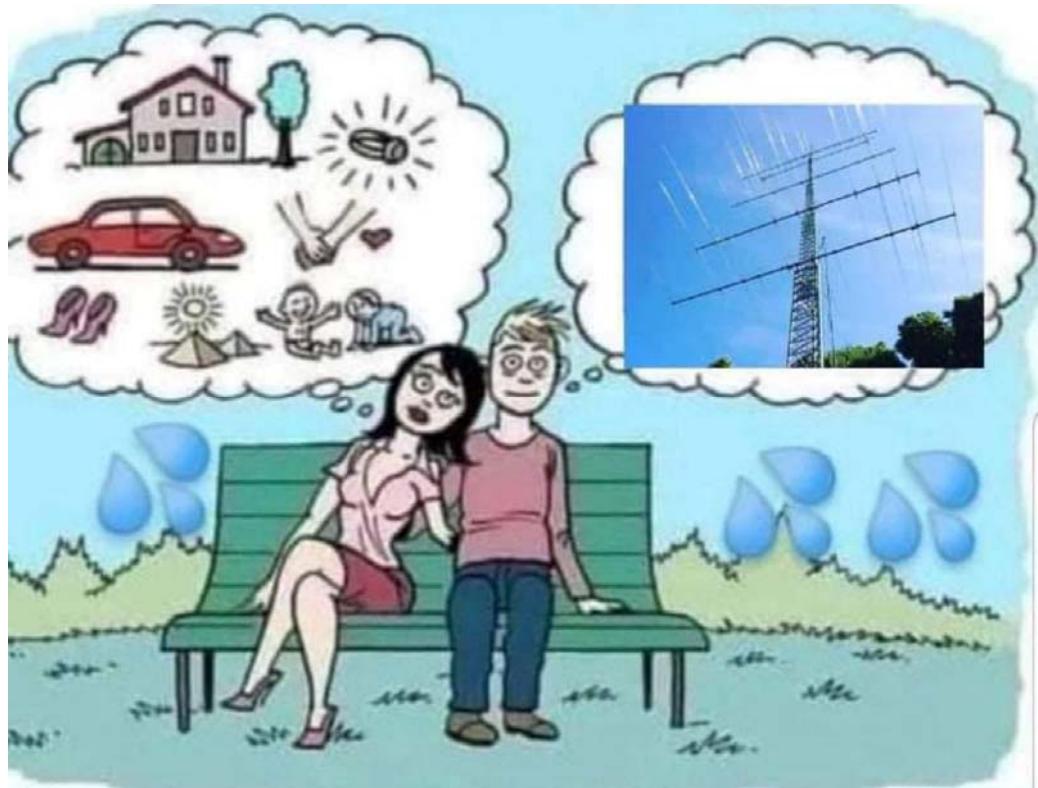
~Mick VK3CH

HAM RADIO IS HEALTHY FOR YOU – LOTS OF WALKING OUTSIDE

ACTIVITY	DISTANCE Meters
Take tripod base from car to area to be setup	10
Return to car	10
Run coax to tripod and attach	10
Return to car	10
Collect ground counterpoise radials and take to tripod base	10
Attach first 20 meter ground counterpoise radial and walk out to the end of the wire	20
Return to tripod base	20
Attach second 20 meter ground counterpoise radial and walk out to the end of the wire	20
Return to tripod base	20
Attach third 20 meter ground counterpoise radial and walk out to the end of the wire	20
Return to tripod base	20
Attach first 40 meter ground counterpoise radial and walk out to the end of the wire	40
Return to tripod base	40
Attach second 40 meter ground counterpoise radial and walk out to the end of the wire	40
Return to tripod base	40
Attach third 40 meter ground counterpoise radial and walk out to the end of the wire	40
Return to tripod base	40
Return to car collect ground stakes and a hammer	10
Insert ground stake one	10
Insert ground stake two	20
Insert ground stake three	20
Return hammer to car	20
Collect capacity hat twine roll and take to tripod base	10
Tie off first capacity hat wire and run out tie off twine to post	10
Return to tripod base	10
Tie off second capacity hat wire and run out tie off twine to post	10
Return to tripod base	10
Tie off third capacity hat wire and run out tie off twine to post	10
Return to tripod base	10
Erect squid pole, then return to car	10
Operate 160 meters	10
Time to pack up	
Walk to tripod base	10
Lower squid pole	10
Return to car	10
Collect reel to collect ground radials and return to tripod base	10
Disconnect first ground radial wire and roll up	
Disconnect second ground radial wire and roll up	
Disconnect third ground radial wire and roll up	
Return full roll to car	10
Go to first ground stake and remove twine and remove stake from ground	20
Go to second ground stake and remove twine and remove stake from ground	20
Go to third ground stake and remove twine and remove stake from ground	20
Return all these items to the car	10
Walk to tripod base	10
Fully lower tripod while collecting the internal wire without it tangling up	30
Take squid pole to car	10
Walk to tripod base with reel to collect twine	10
Reel up three lots of twine	
Return reel to car	10
Walk to tripod base	10
Pack up tripod base and return to car	10

Total Walked

770



Southern Peninsula Amateur Radio Club

RadioFest

was going to be

Sunday 13th February

******* CANCELLED *******

Due to the substantial Omicron COVID outbreak, the SPARC committee has decided to defer the RadioFest to later in the year.

The potential health risks to mature age patrons, table vendors, club members, the implications for the school should a case be confirmed, let alone any changes to Government regulations are too onerous for the event to be held at this time.

Provisionally the Committee is thinking of a Sunday in November 2022.

You will receive further advice once the date has been firmed up by the SPARC Committee.

NEVARC News

The club magazine

All it needs is YOU
Send stories of your radio news to the editor

What have you been up to in these strange days of COVID?

magazine@nevarc.org.au

Australia Ham Radio 40 Meter Net



**7 Days a Week
10am Local time
(East coast)**

7.100 MHz LSB

Approximately + or – QRM

Hosted by Ron VK3AHR

NEVARC 2 Meter Net

Net Control VK3ANE

VK2RWD

Wednesday - 8.00pm

Local time

President, VK3VS, Matt
Vice President, VK2VU, Gary
Secretary, VK2BFC, Frank
Treasurer, Amy Bilston



NEVARC CLUB PROFILE

History

The North East Victoria Amateur Radio Club (NEVARC) formed in 2014.

As of the 7th August 2014, Incorporated, Registered Incorporation number A0061589C.

NEVARC is an affiliated club of the Wireless Institute of Australia and The Radio Amateur Society of Australia Inc.

Meetings

Meetings details are on the club website, the Second Sunday of every month, check for latest scheduled details.

Meetings held at the Belvoir Guides Hall, 6 Silva Drive West Wodonga.

Meetings commence with a BBQ (with a donation tin for meat) at 12pm with meeting afterwards.

Members are encouraged to turn up a little earlier for clubroom maintenance.

Call in Via VK3RWO, 146.975, 123 Hz tone.

NEVARC NETS

HF

7.100 MHz 7 Days a Week - 10am Local time

VHF

VK2RWD Wednesday - 8.00pm Local time

Benefits

To provide the opportunity for Amateur Radio Operators and Short Wave Listeners to enhance their hobby through interaction with other Amateur Radio Operators and Short Wave Listeners. Free technology and related presentations, sponsored construction activities, discounted (and sometimes free) equipment, network of likeminded radio and electronics enthusiasts. Excellent club facilities and environment, ample car parking.

Website: www.nevarc.org.au

Postal: NEVARC Secretary
PO Box 8006
Birallee Park
Wodonga Vic 3690

Facebook: www.facebook.com/nevicARC/



All editors' comments and other opinions in submitted articles may not always represent the opinions of the committee or the members of NEVARC, but published in spirit, to promote interest and active discussion on club activities and the promotion of Amateur Radio. Contributions to NEVARC News are always welcome from members.

Email attachments of Word™, Plain Text, Excel™, PDF™ and JPG are all acceptable.

You can post material to the Post Office Box address at the top of this page, or email magazine@nevarc.org.au

Please include a stamped self-addressed envelope if you require your submission notes returned.

Email attachments not to exceed 5 Mb in file size. If you have more than 5 Mb, then send it split, in several emails to us.

Attachments of (or thought to be) executable code or virulently affected emails will not be opened.

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While we strive to be accurate, no responsibility taken for errors, omissions, or other perceived deficiencies, in respect of information contained in technical or other articles.

Any dates, times and locations given for upcoming events please check with a reliable source closer to the event.

This is particularly true for pre-planned outdoor activities affected by adverse weather etc.

The club website <http://nevarc.org.au>/has current information on planned events and scheduled meeting dates.

You can get the WIA News sent to your inbox each week by simply clicking a link and entering your email address found at www.wia.org.au. The links for either text email or MP3 voice files are there as well as Podcasts and Twitter. This WIA service is FREE.